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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/519,589	12/28/2004	Erich Becker	SMB-PT123 (PC03 200 B US)	9648
3624	7590	06/19/2007	EXAMINER	
VOLPE AND KOENIG, P.C. UNITED PLAZA, SUITE 1600 30 SOUTH 17TH STREET PHILADELPHIA, PA 19103			FRANTZ, JESSICA L	
			ART UNIT	PAPER NUMBER
			3746	
			MAIL DATE	DELIVERY MODE
			06/19/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/519,589	Applicant(s) BECKER ET AL.	
	Examiner Jessica L. Frantz	Art Unit 3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/28/2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>12/28/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 14 which refers to a gap. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant has not previously recited "the valve abutment surface" in claim 1 and therefore, it is unclear if this feature is even material to the invention. To be positively recited, the limitation must not be recited as intended use.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-2 and 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Broyan 4,196,746 in view of Edwards et al. 5,025,829. Broyan teaches the invention as claimed including a pump (compressor) comprising as least one shield valve 10 which has a valve disk 10 of flexible material, which is clamped in a central region as shown in figures 4-5 and is movable between an open and closed position, in said closed position the valve disk closes at least one valve opening as shown in figure 10 wherein extensions (tabs as shown in figure 5) project from the valve disk in step form for limiting a valve opening motion. The plurality of extensions project generally uniformly from a peripheral edge of the disk as shown in figure 5 and wherein the central region of the valve disk is centered by a pin 11 which passes through a central perforation as shown in figure 4 and the extension extend at least sectionally transversely to the disk radius in a spiral form and wherein at least one gap (not labeled, see figure 5) acting as a passage opening is provided. Broyan fails to teach a sealing ring connected to the valve disk via the extensions. Edwards teaches a sealing ring 14 connected to the valve disk 18 via extensions 20 and gaps 16 between the valve disk and sealing ring. Edwards further teaches the valve disk is clamped between two

housing portions 22, 24. Edwards teaches this valve disk structure for sealing the housing together and creating a simple construction which allows various amounts of preloading (Edwards, column 2, lines 20-44). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have used the sealing ring of Edwards for the purpose of sealing the housing together and creating a simple construction which allows various amounts of preloading (Edwards, column 2, lines 20-44).

6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Broyan 4,196,746 in view of Edwards et al. 5,025,829 and further in view of Becker et al. 5,275,541. The modified invention of Broyan in view of Edwards teaches the invention substantially as claimed but fails to teach the following claimed limitation as taught by Becker: the valve abutment surface 28 has an approximately conical shape as shown in figures 2-5 for the purpose of receiving the portion of the valve element 24 which extends outwardly beyond the surface 40 when the valve 22 is open and enables the median portion of the diaphragm 3 to draw fluid from a suitable source into the chamber 13 (see Becker column 6, lines 49-57). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have made the valve abutment surface in the form of Becker's valve abutment surface for the purpose of receiving the portion of the valve element 24 which extends outwardly beyond the surface 40 when the valve 22 is open and enables the median portion of the diaphragm 3 to draw fluid from a suitable source into the chamber 13 (see Becker column 6, lines 49-57).

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Nardi 6,250,331
- Diebold 2,679,860 (teaches same structure)
- Doeg 2,752,943
- Nicklas 2,682,280
- Choksi 5,727,594
- Tai et al. 6,240,962

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jessica L. Frantz whose telephone number is 571-272-5822. The examiner can normally be reached on Monday through Friday 8:30a.m. - 5:00p.m. E.S.T..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Stashick can be reached on 571-272-4561. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3746

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jessica Frantz

JF



ANTHONY D. STASHICK
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700